

**PERMIT APPLICATION:** NRS#04.247

**APPLICANT:** RUSCO

6465 Quail Hollow  
Suite 103  
Memphis, TN 38120

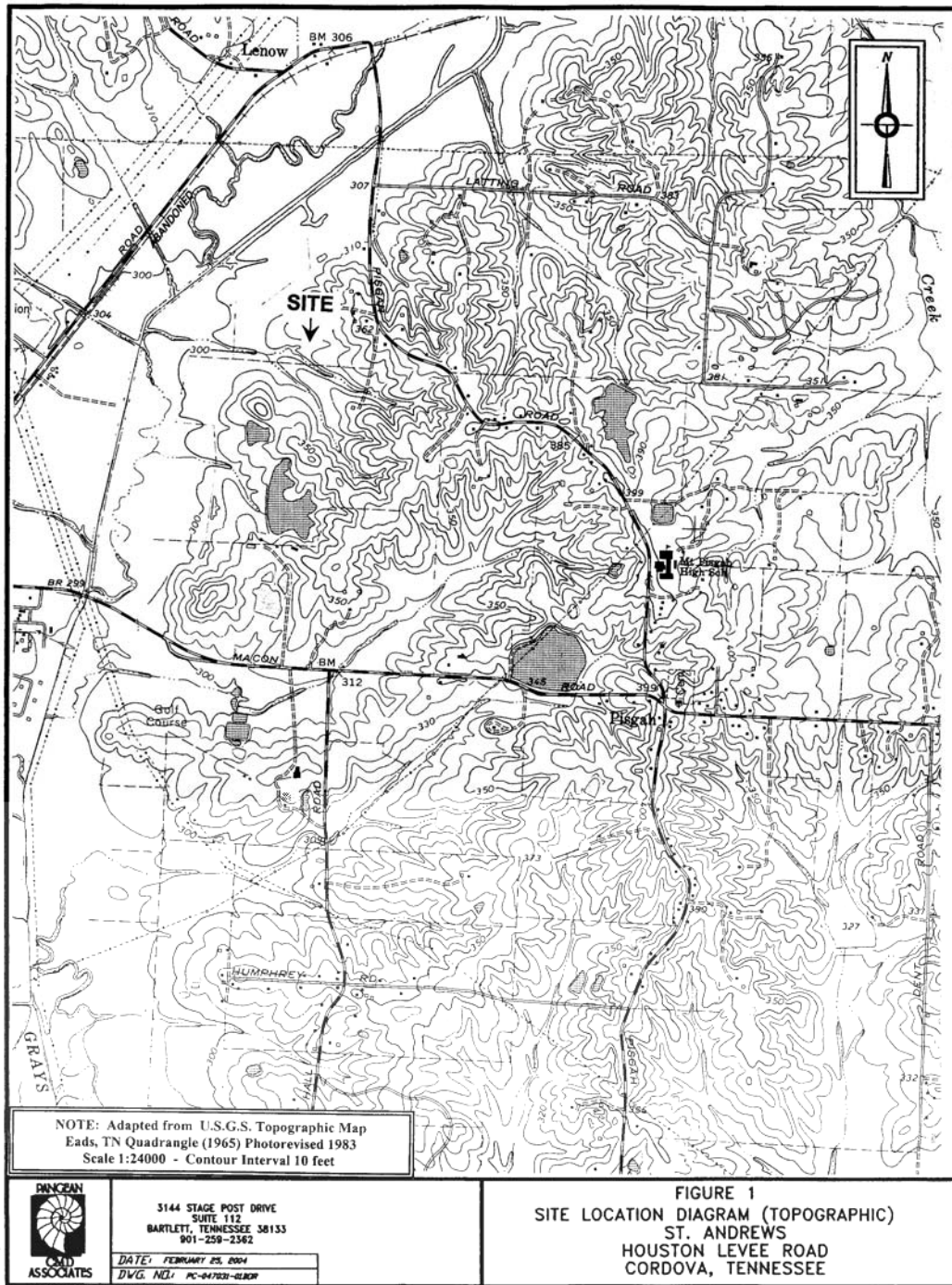
**LOCATION:** Two unnamed tributaries to Grays Creek  
Shelby County

**WATERSHED DESCRIPTION:** This project is located in a developing residential area on the east side of Houston Levee Road, north of Macon Road in Cordova, Shelby County, TN. Each tributary ranges in width from 10 to 15 feet from top of bank to top of bank and four to eight feet at the bottom. Both tributaries are characterized by steep, nearly vertical slopes in some areas that form a cut ranging from four to six feet from grade surface. The substrate of the two channels is similarly characterized by silty coarse sands in most areas to a more clay-like silt in those areas impacted by temporarily pooled water following storm events. The riparian corridors are narrow and consist of mostly mature wooded trees, namely oak, American elm, ash, and maple. The groundcover consists of saplings over a diverse ground cover of weedy growth.

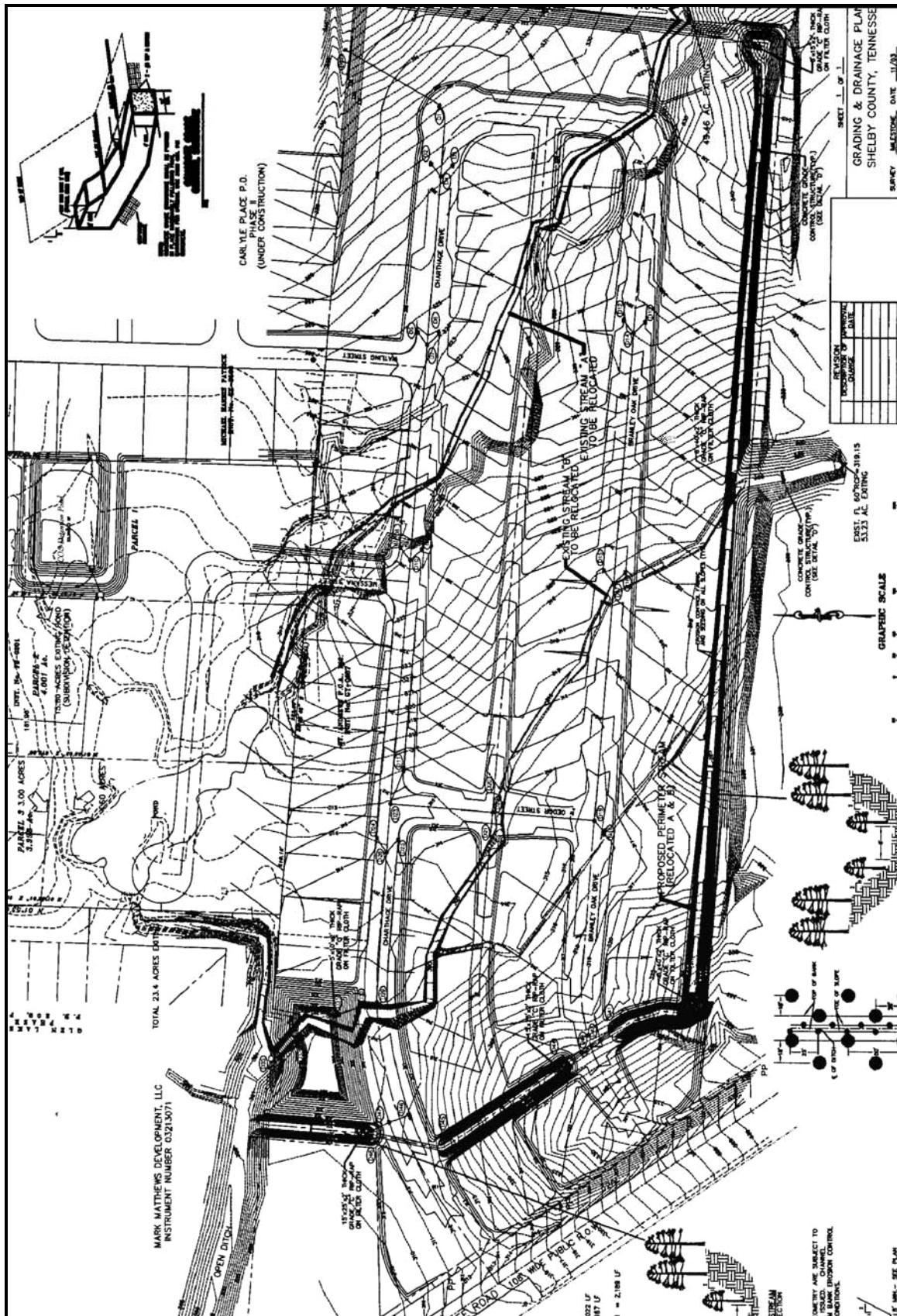
**PROJECT DESCRIPTION:** The applicant proposes to relocate approximately 1,560 linear feet and 1,170 linear feet, respectively (total of 2,730 linear feet), of two unnamed intermittent tributaries to Grays Creek into one constructed channel along the southern border of the property. The proposed channel will be approximately 2,040 linear feet, resulting in a net loss of 690 linear feet of stream. The proposed channel will be approximately 8 feet wide with the banks graded to a 2:1 slope. The applicant proposes to protect the channel from down cutting by placing concrete grade control structures at calculated points and riprap structures at five potential impact areas to prevent scouring during periods of increased flow. The applicant proposes a 30-foot buffer zone on the north side of the channel and a 25-foot buffer zone on the south side. Within this buffer zone, vegetation will include tulip poplar, variety of oak species, ash, elm, and maple. Bald Cypress will be planted at the toe of the slope along both sides of the channel. The applicant proposes to mitigate for the 690 linear feet of class three (III) alterations by paying \$138,000 to the Tennessee Wildlife Resources Foundation for the in-lieu fee Tennessee Stream Mitigation Program.

**PERMIT COORDINATOR:** Kelly Morrison

**USGS TOPOGRAPHIC QUADRANGLE:** Eads, TN (416-NW)



Topographic Map



## Grading and Drainage Plan